

IN THE CLAIMS

Claims 1-9 (Canceled)

10. (Currently amended) A method of manufacturing a semiconductor device, comprising the steps of:

preparing a phase shifting mask including (a) an element forming area having a semitransparent phase shifting film ~~provided at an element forming area on a photomask substrate,~~ and (b) a light shielding area provided at a peripheral edge of said element forming area and serving to make an intensity of light having passed through said light shielding area smaller than an intensity of light having passed through said semitransparent phase shifting film, as measured on a to-be-exposed photoresist film, and said light shielding area further including a target pattern for mask aligning; and transmitting, with a projection exposure optical system, a pattern formed element forming area of said phase shifting mask onto said photoresist film.

11. (Original) A method of manufacturing a semiconductor device according to claim 10, wherein said light shielding area includes a scribing area.

12. (Original) A method of manufacturing a semiconductor device according to claim 11, wherein said

target pattern for mask aligning is disposed at said scribing area.

13. (Original) A method of manufacturing a semiconductor device according to claim 10, wherein said phase shifting mask includes a plurality of said element forming area.

14. (Currently amended) A method of manufacturing a semiconductor device, comprising the steps of:

preparing a phase shifting mask including (a) an element forming area having a first semitransparent phase shifting film disposed on an element forming area and having a transmittance with respect to exposure light not higher than 25%, and (b) a light shielding area provided at a peripheral edge of said element forming area and serving to make an intensity of light having passed through said light shielding area smaller than an intensity of light having passed through said semitransparent phase shifting film, as measured on a to-be-exposed photoresist film, and said light shielding area further including a target pattern for mask aligning;

preparing a semiconductor substrate at which said photoresist film to be exposed is formed; and

transmitting, with a projection exposure optical system, a pattern formed element forming area of said phase shifting mask onto said photoresist film.

15. (Original) A method of manufacturing a semiconductor device according to claim 14, wherein said light shielding area includes a scribing area.

16. (Original) A method of manufacturing a semiconductor device according to claim 15, wherein said target pattern for mask aligning is disposed at said scribing area.

17. (Original) A method of manufacturing a semiconductor device according to claim 14, wherein said phase shifting mask includes a plurality of said element forming area.

18. (Original) A method of manufacturing a semiconductor device according to claim 14, wherein said light shielding area includes a semitransparent phase shifting pattern having a semitransparent phase shifting portion and a transparent portion.

19. (Currently amended) A method of manufacturing a semiconductor device according to claim 18,

wherein a ratio α of an area of said transparent portion to an area of said semitransparent phase shifting portion is defined as $\alpha = \beta \cdot \sqrt{T}$, where T represents a transmittance of said semitransparent phase shifting portion, and β is in a range of $0.5 \leq \beta \leq 2.0$.

20. (Original) A method of manufacturing a semiconductor device, comprising the steps of:

preparing a transparent phase shifting mask including (a) a hole formation semitransparent phase shifting film formed at an element forming area on a photomask substrate, and (b) a light shielding area provided at a peripheral edge portion of said element forming area and serving to make an intensity of light having passed through said light shielding area smaller than an intensity of light having passed through said semitransparent phase shifting film, as measured on a to-be-exposed photoresist film, said light shielding area further including a target pattern for mask aligning; and

exposing, with a projection exposure optical system, a hole pattern formed on said element forming area of said phase shifting mask onto said photoresist film.

21. (Original) A method of manufacturing a semiconductor device according to claim 20, wherein said light shielding area includes a scribing area.

22. (Original) A method of manufacturing a semiconductor device according to claim 21, wherein said target pattern for mask aligning is disposed at said scribing area.

23. (Original) A method of manufacturing a semiconductor device according to claim 20, wherein said phase shifting mask includes a plurality of said element forming area.

24. (Original) A method of manufacturing a semiconductor device according to claim 20, wherein a transmittance of said semitransparent phase shifting film with respect to exposure light is not higher than 25%.

25. (New) A method of manufacturing a semiconductor device according to Claim 10,

wherein said light shielding area includes a semitransparent phase shifting pattern having a semitransparent phase shifting portion and a transparent portion.

26. (New) A method of manufacturing a semiconductor device according to Claim 10,

wherein a ratio α of an area of said transparent portion to an area of said semitransparent phase shifting portion is defined as $\alpha = \beta \cdot \sqrt{T}$, where T represents a transmittance of said semitransparent phase shifting portion, and β is in a range of $0.5 \leq \beta \leq 2.0$.

27. (New) A method of manufacturing a semiconductor device according to Claim 10,

wherein the peripheral edge is double-exposed in said transmitting step.

28. (New) A method of manufacturing a semiconductor device according to Claim 14,

wherein the peripheral edge is double-exposed in said transmitting step.